



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
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Canada

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②

D119-796-141TRN
Job Sheet 198917



Part No: D119-796-141TRN

Job Qty: 1 pcs

Part Name: Crosstube Turning Detail



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 8/7/19

Job Tracking No:

Due Date: 8/21/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: D119-796-141 REV H IPP REV A RQ 14/06/06 VERIFIED BY DD IPP REV:B 16.05.04 AS PER DWG REV.H
DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time	DAS Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier			
100	Mori Seiki TL-40 - 1	1 pcs		8/21/19	1.00	1.52	Mori Seiki TL-40 - 1			662019-08-20 9-89
110	QC 2	1 pcs		8/21/19	0.00	0.00	QC 2 - 1			
							QC 2 - 12			
							QC 2 - 14			
							QC 2 - 17			
							QC 2 - 19			
							QC 2 - 2			
							QC 2 - 20			
							QC 2 - 22			
							QC 2 - 23			
							QC 2 - 25			
							QC 2 - 32			
							QC 2 - 33			
							QC 2 - 35			
							QC 2 - 39			
							QC 2 - 4			
							QC 2 - 40			
							QC 2 - 44			
							QC 2 - 45			
							QC 2 - 48			
							QC 2 - 49			
							QC 2 - 50			
							QC 2 - 51			
							QC 2 - 52			
							QC 2 - 57			
							QC 2 - 62			
							QC 2 - 63			
							QC 2 - 8			
							QC 2 - 66			662019-08-20 9-89
							QC 2 - 64			

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					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
120	Mori Seiki TL-40 - 1 - B4B	1	8/21/19	1.00 1.52	Mori Seiki TL-40 - 1 - B4B	DAS 662019-08-22 9-89
	pcs				QC 2 - 1	
130	QC 2	1	8/21/19	0.00 0.00	QC 2 - 12	
	pcs				QC 2 - 14	
					QC 2 - 17	
					QC 2 - 19	
					QC 2 - 2	
					QC 2 - 20	
					QC 2 - 22	
					QC 2 - 23	
					QC 2 - 25	
					QC 2 - 32	
					QC 2 - 33	
					QC 2 - 35	
					QC 2 - 39	
					QC 2 - 4	
					QC 2 - 40	
					QC 2 - 44	
					QC 2 - 45	
					QC 2 - 48	
					QC 2 - 49	
					QC 2 - 50	
					QC 2 - 51	
					QC 2 - 52	
					QC 2 - 57	
					QC 2 - 62	
					QC 2 - 63	
					QC 2 - 8	
					QC 2 - 66	DAS 662019-08-22 9-89
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
140	QC 8	1	8/21/19	0.00 0.00	QC 8 - 12	
	pcs				QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	

					QC 8 - 67	
					QC 8 - 1 (A)	DAS
					QC 8 - 47	47
					QC 8 - 40	9-89
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
145 Crosstubes - 2 - B4B	1 pcs	8/21/19	0.00 0.33	Crosstubes - 1 - B4B		
				Crosstubes - 2 - B4B	BB 9/6/20A	
				Crosstubes - 3 - B4B		
				Crosstubes - 4 - B4B		
150 Handfinish - 1-1 Chemical-B4B	1 pcs	8/21/19	0.00 0.40	Handfinish - 1 - 1 - B4B	3EB/9-10-07	
				Handfinish - 1 - 2 - B4B		
				Handfinish - 1 - 3 - B4B		
				Handfinish - 1 - 4 - B4B		
				Handfinish - 1 - 5 - B4B		
				Handfinish - 1 - 6 - B4B		
				Handfinish - 1 - 7 - B4B		
				Handfinish - 1 - 8 - B4B		
				Handfinish - 1 - 9 - B4B		
				Handfinish - 1 - 10 - B4B		
				Handfinish - 1 - 11 - B4B		
				Handfinish - 1 - 12 - B4B		
				Handfinish - 1 - 13 - B4B		
				Handfinish - 1 - 14 - B4B		
				Handfinish - 1 - 15 - B4B		
				Handfinish - 1 - 16 - B4B		
				Handfinish - 1 - 17 - B4B		
				Handfinish - 1 - 18 - B4B		
				Handfinish - 1 - 19 - B4B		
				Handfinish - 1 - 20 - B4B		
				Handfinish - 1 - 21 - B4B		
				Handfinish - 1 - 22 - B4B		
160 QC 7	1 pcs	8/21/19	0.00 0.00	QC 7 - 10		
				QC 7 - 13		
				QC 7 - 14		
				QC 7 - 15		
				QC 7 - 17		
				QC 7 - 18		
				QC 7 - 19		
				QC 7 - 2		
				QC 7 - 28		
				QC 7 - 3		
				QC 7 - 30		
				QC 7 - 34		
				QC 7 - 36		
				QC 7 - 37		
				QC 7 - 41		
				QC 7 - 47	JP 19-10-11	
				QC 7 - 48		
				QC 7 - 51		
				QC 7 - 58		
				QC 7 - 59		
				QC 7 - 60		
				QC 7 - 9		
				QC 7 - 68		
				QC 7 - 50		
				QC 7 - 67		
				QC 7 - 40		

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				QC 7 - 24	
				QC 7 - 43	
				QC 7 - 61	
				QC 7 - 81	
170	Packaging 3-1 - Stock - B4B	1	8/21/19	0.00 0.00	Packaging 3 - 1 - B4B
	pcs				Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
180	QC 21 - FG	1	8/21/19	0.00 0.00	QC 21 - FG - 21
	pcs				QC 21 - FG - 70
					QC 21 - FG - 53

NO 19-10-11

DAS OCT 1 1 2019
21
9-50

Part Op 100 - 1-Fill tube with sand & install plugs on both ends as per Folio FB316 2-Turn first side as per Folio FB316 3-Blend
 Descriptions: transition lines only, **do not sand whole tube**: FOLIO REV: H DWG REV: H *Use mill bastard
 file, brush file repeatedly with file card. *Do not use sandpaper coarser than 320 grit.
 110 - (QC2- Inspect parts off machine FAI/FAIB)
 120 - 1-Turn second side as per Folio FB316 2-Blend transition lines only, **do not sand whole tube**: 3-Remove sand
 and plugs 4- scribe batch # and part # as per dwg
 130 - (QC2- Inspect parts off machine FAI/FAIB)
 140 - (QC8- Inspect parts - second check)
 145 - GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY.
 150 - 1- handfinish X-TUBE INSIDE AND OUT 2- ALODINE AND ACID ETCH X-TUBE INSIDE AND OUT. USE RED
 SCOTCH BRITE
 160 - (QC7-Inspect Chemical Conversion Coat)
 170 - (Identify as per dwg & Stock Location:) LOCATION : LG014
 180 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6024-103	Crosstube Material	1 pcs (1 ea)	100-Mori Seiki TL-40 - 1	FISO 732

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Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Mori Seiki TL-40 - 1	D6024-103	1	7	0
Part Specifications				
Specifications could not be found.				



Container No: S207083



Part: D119-796-141TRN

Job No: 198917

Serial No/Batch: S207083

Revision: H

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K84 1K7
CANADA
TEL.: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

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Date: 08/20/19

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DART AEROSPACE LTD	Work Order:	198917
Description: Crosstube Assembly (AW119 MKII Fwd)	Part Number:	D119-796-141TRN
Inspection Dwg: D119-796-141 Rev: H		Page 1 of 2

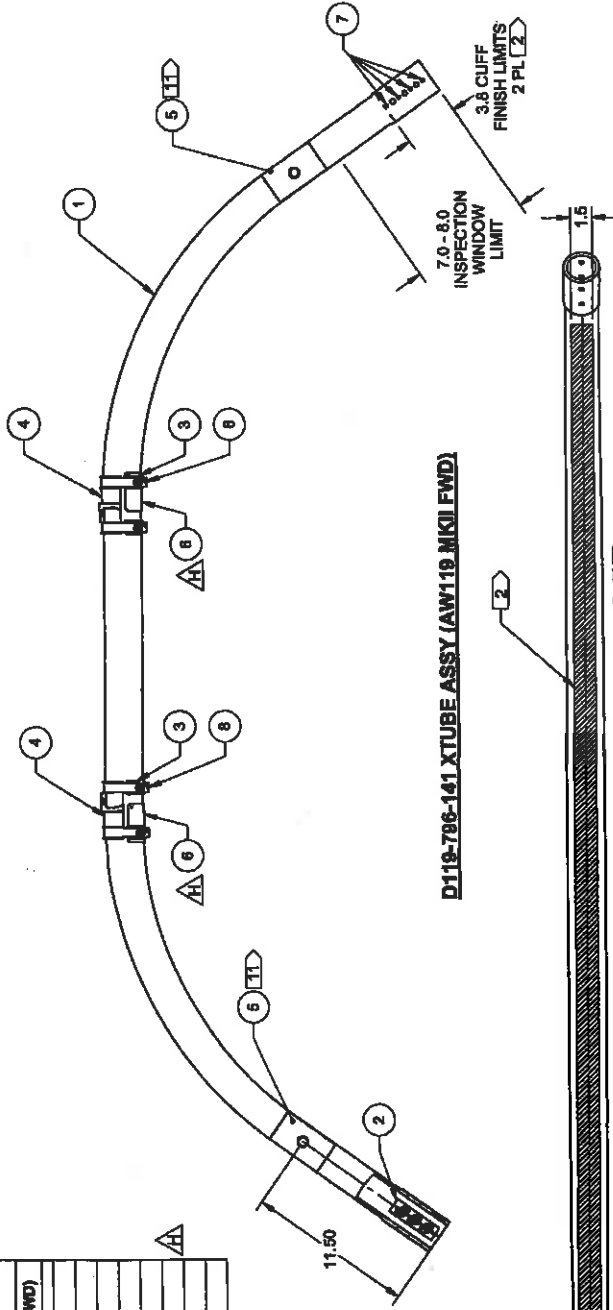
FIRST ARTICLE INSPECTION CHECKLIST

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	6.00	+/-0.030	6.000	✓		CNC-08	
	2.516	+/-0.005	2.521	✓		CNC-04	
	2.333	+0.005/-0.000	2.337	✓		↓	
	2.333	+0.005/-0.000	2.338	✓			
	2.408	+0.005/-0.000	2.413	✓			
	2.502	+0.005/-0.000	2.507	✓			
	2.596	+0.005/-0.000	2.601	✓			
	2.596	+0.005/-0.000	2.601	✓			
SIDE B	6.00	+/-0.030	6.004	✓		CNC-08	
	2.516	+/-0.005	2.521	✓		CNC-04	
	2.333	+0.005/-0.000	2.337	✓		↓	
	2.333	+0.005/-0.000	2.338	✓			
	2.408	+0.005/-0.000	2.413	✓			
	2.502	+0.005/-0.000	2.507	✓			
	2.596	+0.005/-0.000	2.601	✓			
	2.596	+0.005/-0.000	2.601	✓			
	102.26	+/-0.020	102.26	✓		Tape	

ITEM	QTY	PIN	DESCRIPTION
1	X	D119-796-141	XTUBE ASSY (AW119 MKII FWD)
2	1	D119-796-141BND	CROSSTUBE, FWD
3	4	D2873-043	RADIUS BLOCK
4	4	D6123-3	CLAMP CUSHION
5	2	D6124-1	FWD SUPPORT
6	2	D5152-041	FWD POST MOUNT ASSY
7	16	D5305-1	SHIM
8	4	MS21820-24	RIVET, BLIND CSK
9	4	MS21820-24	CLAMP

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 198917
M13
19-08-07

D119-796-141 XTUBE ASSY (AW119 MKII FWD)



RELEASED
2015-11-04
6201 P-4-12

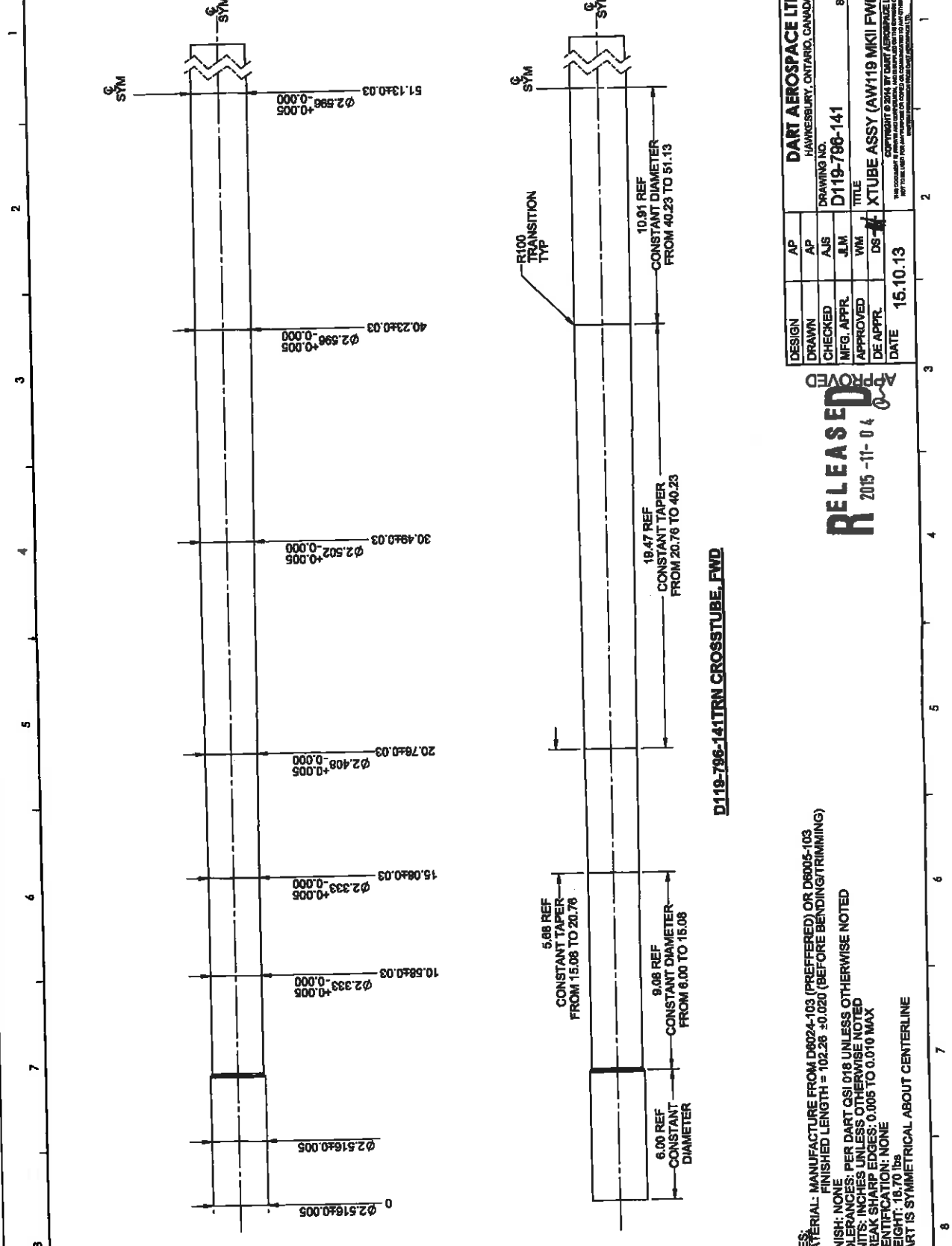
REV	DESCRIPTION	DATE
DESIGN	AP	15.10.13
DRAWN	AP	15.10.13
CHECKED	AJS	15.04.24
MFG. APPR.	JLM	16.02.03
APPROVED	WM	15.01.15
DE APPR.	DS-1	14.11.25
DATE	15.10.13	

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: APPLY MATTE CLEAR COAT PER QSI 006 4.2 MASK D5124-1 FWD SUPPORTS, D5305-1 SHIMS AS WELL AS UNDERSIDE OF CROSSTUBE AS SHOWN (B3-1, HATCHED AREA). PAINT OUTSIDE PER DART QSI 006 4.2 AFTER APPLYING CLEAR COAT DO NOT APPLY FINISH (PAINT OR CLEAR COAT) TO CLIFFS IN LOCATION SHOWN, MASK PRIOR TO FINISHING DO NOT APPLY QSI 018 UNLESS OTHERWISE NOTED
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY USING PART NUMBER 'D119-796-141' AND BATCH NUMBER ON INSIDE OF CLIFF PER QSI 044 6.4
 - 7) WEIGHT: 18.54 lbs
 - 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM DEFECTS SUCH AS SCRATCHES, NICKS OR DENTS. DEFECTS UP TO 0.005 MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. PRIOR TO FINISHING, ABRASE MATING SURFACES OF D5124-1 FWD SUPPORTS AND CROSSTUBE WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4108S WASHN/WIPE DEGREASER. APPLY A 0.1 MIN THK LAYER OF PROSEAL 890 ON THE INSIDE CONCAVE SURFACE OF THE D5124-1 FWD SUPPORTS AND INSTALL AT AN 8.4° OFFSET FROM THE CROSSTUBE BENDING PLANE. INSTALL THE MS21820-24 CLAMPS AND D5123-3 CLAMP CUSHIONS WHILE WET.
 - 10) TORQUE MS21820 CLAMPS 80 - 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY. THE NUT IS FACING AFT AND HAS NOT BOTTOMED OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.
 - 11) PRIOR TO FINISHING, ABRASE MATING SURFACES OF CROSSTUBE AND D5152-041 WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4108S WASHN/WIPE DEGREASER. INSTALL D5152-041 WITH LAYER OF PROSEAL 890 ON INSIDE CONCAVE SURFACE, 0.1 MIN THK. LOCATE D5152-041 USING TOOL DT10089.
 - 12) PRIOR TO FINISHING, ABRASE MATING SURFACES OF CROSSTUBE AND D5305-1 SHIM WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4108S WASHN/WIPE DEGREASER. INSTALL D5305-1 SHIM WITH LAYER OF PROSEAL 890 ON INSIDE CONCAVE SURFACE, 0.1 MIN THK. USE ADDITIONAL TEMPORARY MS21820-24 CLAMP TO APPLY CLAMPING PRESSURE FOR 72 HOURS.

APPROVED

DESIGN	AP	15.10.13
DRAWN	AP	15.10.13
CHECKED	AJS	15.04.24
MFG. APPR.	JLM	16.02.03
APPROVED	WM	15.01.15
DE APPR.	DS-1	14.11.25
DATE	15.10.13	

DART AEROSPACE LTD
HAWKSBURY, ONTARIO, CANADA
DRAWING NO. D119-796-141
TITLE XTUBE ASSY (AW119 MKII FWD)
SCALE NTS
SHEET 1 OF 8
REV. H



DART AEROSPACE LTD			
HAWKESBURY, ONTARIO, CANADA			
DESIGN	AP	AP	REV. H
DRAWN	AP	AP	DRAWING NO.
CHECKED	AJS	AJS	D119-796-141
MFG. APPR.	JLM	JLM	SHEET 8 OF 8
APPROVED	WM	WM	TITLE
DE APPR.	DS	DS	XTUBE ASSY (AW119 MKII FWD)
DATE	15.10.13	15.10.13	SCALE
			NTS

RELEASED
2015-11-04



Entered: _____ Date: _____ **WORK ORDER NON-CONFORMANCE / ROUTE UPDATE**

Route update only

NCR No. _____

Job: _____		DISPOSITION		DEPARTMENT/PROCESS		MRB (QS1042)			
Part No. _____		Rework Scrap Use-as-is		Cross tube Small Fab Finishing		Eng. (Non-AW) Prod. Eng. Coord. Rec/Store/Packaging		Engineering Water Jet Supplier Quality	
Date: _____		Sequence #: _____		QTY Affected: _____		Disposition		Completed By	
Description Work Order Deviation								Lead hand / Supervisor	
								QC / QA Coordinator	
Root Cause		FAULT CATEGORY							
Operator		Pressure/Forced		Contamination		Power Loss/Surge		Positioned Wrong	
Manufacturing Process		Bending		Misaligned/off center		Folio/Program		Outside Tolerance	
Equip/Tooling		Crushing		BOM/Route		Grain Direction		Drawing	
Handling/Preservation		Cracks		Broken/Damage/Defect		Weld		Finish	
Material		Crimp/Kink/Ripple/Wave/Twist		Incomplete/Unclear Instructions		Wrong Stock Pulled		Part Lost/Missing	
Product Improvement		Marks/Chatter		Drill Holes		Out of Sequence		Misread	
Process Improvement		Mislabeled		Fit/Function		Off-set/Set-up			
Human Factors									
		Other/Details:							